

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
19 May 2005 (19.05.2005)

PCT

(10) International Publication Number
WO 2005/045377 A3

(51) International Patent Classification⁷: **A61B 5/00** (74) Agent: REINHOLD COHN AND PARTNERS; P.O. BOX 4060, 61040 TEL AVIV (IL).

(21) International Application Number:
PCT/IL2004/001015

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(22) International Filing Date:
4 November 2004 (04.11.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
10/702,044 6 November 2003 (06.11.2003) US

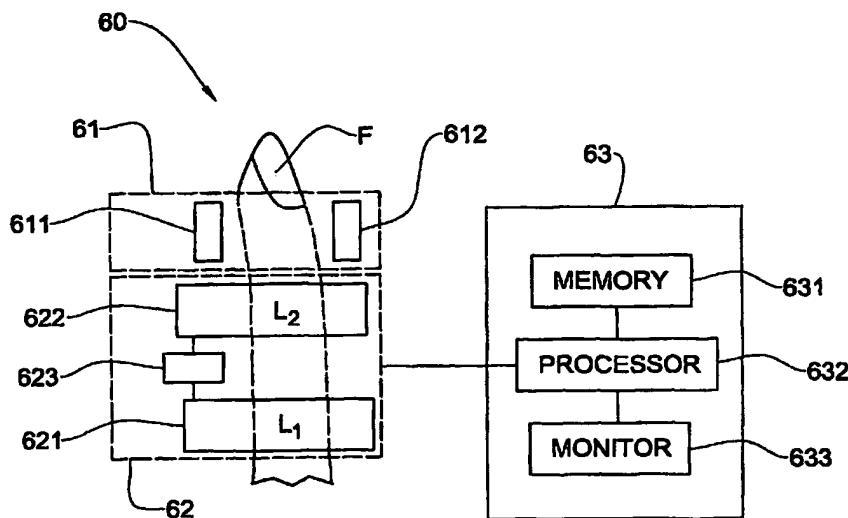
(71) Applicant (for all designated States except US): ORS-ENSE LTD. [IL/IL]; 2 Prof. Bergman Street, 76705 Rehovot (IL).
(72) Inventors; and
(75) Inventors/Applicants (for US only): FINE, Ilya [IL/IL]; 59/6 Herzl Street, 76540 Rehovot (IL). FINAROV, Alexander [IL/IL]; 1/10 Kovshy Ha-Hermon, 76555 Rehovot (IL). GANDELMAN, Josef [IL/IL]; 22/22 Hatzmaut Street, 77452 Ashdod (IL). FIKHTE, Boris [IL/IL]; 17/6 Miller Avia, 76284 Rehovot (IL).

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— with international search report

[Continued on next page]

(54) Title: METHOD AND SYSTEM FOR NON-INVASIVE MEASUREMENTS IN A HUMAN BODY



WO 2005/045377 A3

(57) Abstract: A method and system are presented for use in non-invasive measurements in a patient's body. A condition of artificial blood kinetics is created at a measurement location in a patient's blood perfused fleshy medium, and this condition is maintained for a certain time period. An external electromagnetic field is applied to the measurement location while under the condition of artificial blood kinetics. A time variation of a response of the blood perfused fleshy medium to this external electromagnetic field is detected, and measured data indicative thereof is generated. The response of the medium can be a photo-acoustic signal obtained in response to incident light, and/or impedance of the medium in response to the applied ac electromagnetic field.



— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(88) Date of publication of the international search report:
27 October 2005